

# Angela Davis

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## EDUCATION

**Northwestern University** Sept. 2020 – June 2024  
*Bachelor of Science in Computer Engineering, Masters of Science in Computer Science* GPA: 3.85/4.0, 4.0/4.0

## EXPERIENCE

**Research Assistant** March 2021 – June 2024  
*PATH (Personalized and Adaptive Technology for Health) Lab, Northwestern University*

- Led two research projects on developing software and design implementations focused on facilitating social media usage for individuals with photosensitive epilepsy
- Developed a prototype website for uploading and analyzing the visual triggers in short videos using Amazon Web Services (AWS Lambda, S3, RDS)
- Awarded 2 Academic Year Undergraduate Research Grants (AYURG/AAYURG) of 1,000 dollars and presented at the Undergraduate Research Expo and the Computer Science Undergraduate Research Showcase

**Software Engineering Intern** June 2023 – June 2024  
*Caterpillar Inc.*

- Refactored the existing code base for cleaner, safer implementation of the VisionLink app
- Developed a proof of concept to integrate the Google Maps features from Capacitor 5.0
- Experimented on HTML/CSS email compatibility with different email template frameworks (MJML) on popular email service providers such as Gmail and Outlook, automating email testing with a Javascript and Ruby scripts

**Computer Science Peer Mentor** March 2023 – June 2023  
*Northwestern University*

- Assisted students in understanding fundamental programming concepts and algorithms in Python by hosting office hours and answering questions posted on the academic forum (Piazza) for six hours a week

**Technical/Studio Lead** April 2022 – June 2023  
*DISC (Develop and Innovate for Social Change), Northwestern University*

- Conducted workshops for organization members on app development languages and tools, such as Figma, HTML/CSS, Javascript, and React
- Oversaw team projects with clients by offering technical support and optimizing communication with team leads

**Software Engineering Intern** June 2022 – Sept. 2022  
*Caterpillar Inc.*

- Utilized Angular as a front-end framework, along with a standard HTML/CSS/Typescript stack, to work on features (i.e., implementing a QR/barcode scanner, organizing the search engine logic, etc.) in the VisionLink mobile app
- Performed unit testing with Jest and tested overall app functionality on different devices by deploying builds in Android Studio and XCode
- Documented third party APIs by writing Swagger Docs using YAML

## PROJECTS

**RISC-V CPU | Verilog/SystemVerilog, Assembly (RISC-V), Python** Sept. 2023 – March 2024

- Implemented a pipelined (5 stages) RISC-V CPU in Verilog with full forwarding and a 2-bit branch predictor
- Performed gate-level design synthesis of the CPU with Genus and Yosys
- Tested performance of the CPU with benchmarks written in RISC-V and Python

## TECHNICAL SKILLS

**Languages:** Python, C/C++, Javascript/Typescript, HTML/CSS, Assembly (RISC-V, ARM, x86), Verilog/SystemVerilog, Java

**Frameworks:** Angular, React, Amazon Web Services (AWS), Mobile Development (XCode, Android Studio), MATLAB